

- 3 alloyed with the platinum and which is one or more metals selected from the
4 group ^{containing} Ru, Rh, Ti, Cr, Mn, Fe, Co, Ni, Cu, Ga, Zr, Hf and Sn.

IN THE ABSTRACT:

Please replace the abstract with the new abstract which is attached as a separate sheet.

Respectfully submitted,



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Enclosures: Amended Abstract
Version with markings to show changes made

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Kathleen Libby

VERSION WITH MARKINGS TO SHOW CHANGES MADE**IN THE SPECIFICATION:**

Specification at page 13, line 5:

In a future aspect, the present invention provides a fuel cell comprising an electrode structure, comprising a first catalytic component and a second catalytic component, characterised in that the first catalytic component comprises one or more electrocatalyst(s) of formula Pt-Y where Y is a bronze forming element, and optionally a third metal component X which is alloyed with the platinum, and the second catalytic component which comprises one or more electrocatalyst(s) of formula Pt-M where M is a metal alloyed with the platinum.

IN THE CLAIMS:

1. (Amended) An electrode structure comprising a first catalytic component and a second catalytic component, wherein:

(a) said first catalytic component comprises one or more electrocatalyst(s) of formula Pt-Y, wherein Y is Mo, W or an oxide of Mo or W, ~~and optionally a third metal component X which is alloyed with the platinum and which is one or metals selected from the group Ru, Rh, Ti, Cr, Mn, Fe, Co, Ni, Cu, Ga, Zr, Hf and Sn; and~~

(b) said second catalytic component comprises one or more electrocatalyst(s) of formula Pt-M, where M is a metal alloyed with the platinum and is one or more metals selected from the group Ru, Rh, Ti, Cr, Mn, Fe, Co, Ni, Cu, Ga, Zr, Hf and Sn; and

wherein the first and second catalytic components are in ionic contact with each other.

2. (Amended) An electrode structure according to claim 1 ~~wherein X is selected from Ru, Mn, Co, Ni, and Rh and Ni.~~

1 3. (Amended) An electrode structure according to claim 1 ~~or~~
2 ~~claim 2~~, wherein M is selected from Ru or Rh.

1 5. (Amended) An electrode comprising an electrode structure
2 according to ~~any preceding~~ claim 1 wherein the electrocatalyst materials are
3 present on one side of a gas diffusion material.

1 6. (Amended) A catalysed membrane comprising an electrode
2 structure according to ~~any one or more of claims 1 to 4~~ claim 1 wherein the
3 electrocatalyst materials are present on one side of ~~the~~ a polymer electrolyte
4 membrane material.

1 7. (Amended) An MEA comprising an electrode structure
2 according to ~~any one or more of claims 1 to 4~~ claim 1.

1 8. (Amended) An electrode according to claim 5, ~~a catalysed~~
2 ~~membrane according to claim 6 or an MEA according to claim 7~~ wherein the
3 two catalyst materials are formulated into two separate layers.

1 9. (Amended) An electrode according to claim 5, ~~a catalysed~~
2 ~~membrane according to claim 6 or an MEA according to claim 7~~ wherein the
3 two catalyst materials are formulated into one mixed layer.

1 10 (Amended) A fuel cell comprising an electrode structure,
2 comprising a first catalytic component and a second catalytic component,
3 characterised in that the first catalytic component comprises one or more
4 electrocatalyst(s) of formula Pt-Y where Y is ~~a bronze forming element, and~~
5 ~~optionally a third metal component X which is alloyed with the platinum~~ Mo,
6 W, or an oxide of Mo or W, and the second catalytic component ~~which~~
7 comprises one or more electrocatalyst(s) of formula Pt-M, where M is a
8 metal alloyed with platinum and is one or more metals selected from the
9 group Ru, Rh, Ti, Cr, Mn, Fe, Co, Ni, Cu, Ga, Zr, Hf and Sn, and wherein
10 the first and second catalytic components are in ionic contact with each other.

1 11. (Amended) Use of an electrode structure according to ~~any one~~
2 ~~or more of claims 1 to 8~~ claim 1 in a fuel cell.

Claims 12-15 have been added.

Claim 16 has been canceled.

Claims 17 and 18 have been added.

IN THE ABSTRACT:

A ~~piston~~ poison tolerant anode structure for use in fuel cells, in particular suitable for use on proton exchange membrane fuel cells, comprising a first catalytic component Pt-Y where Y is a bronze forming element, and optionally a third metal ~~* X~~ X alloyed with the platinum, and a second catalytic component ~~It-M~~ Pt-M where M, metal, is alloyed with the platinum. An anode, a catalysed membrane, a membrane electrode assembly and a fuel cell comprising ~~said~~ the electrode structure, are disclosed.